Claims

1. Solid-phase substrate with at least one bonding area, which is suitable for immobilizing biomolecules, characterized in that the substrate has reactive bonding sites in the bonding area, pre-synthesized polyol being immobilized at a portion of these bonding sites by means of covalent bonds.

2. The solid-phase substrate of claim 1, characterized in that the bonding area is designed for immobilizing proteins.

3. The solid-phase substrate of claims 1 or 2, characterized in that the polymer chains, which carry reactive bonding sites, are disposed in the bonding area

4. The solid-phase substrate of claim 3, characterized in that additional PEG is bonded in the polymer chains.

5. The solid-phase substrate of one of the preceding claims, characterized in that the polyol used is a monosaccharide, disaccharide or trisaccharide.

6. The solid phase substrate of one of the preceding claims, characterized in that the polyol used is trehalose.

7. The solid-phase substrate of one of the preceding claims, characterized in that the solid-phase substrate is a biochip, an enzyme chip, a protein array, a filter membrane, a microbead, a reaction vessel, a micro-channel system, a flow-through tube system, the tip of a pipette or a flow-through cannula.

8. Method for immobilizing biomolecules in a sample, for which the sample is brought into contact with a solid-phase substrate, which has at least one

bonding area, which is suitable for immobilizing biomolecules, and for which the immobilization takes place in the presence of a substance, which is in a position to stabilize the three-dimensional confirmation of the biomolecules, characterized in that the substrate has reactive bonding sites in the bonding area, polyols are used as substance and the polyols are bonded covalently to a portion of the bonding sites during the method.

9. The method of claim 8, characterized in that the biomolecules are proteins.

10. The method of claims 8 or 9, characterized in that the polyols are bonded covalently to the solid-phase substrate over polymer chains, which are disposed in the bonding area and carry reactive bonding sites.

11. The method of one of the claims 8 to 10, characterized in that polyols and biomolecules are bonded simultaneously to the solid-phase substrate.

12. The method of one of the claims 8 to 10, characterized in that a solid-phase substrate is used, which already contains pre-synthesized, bonded polyols.

13. The method of one of the claims 8 to 12, characterized in that the solid-phase substrate, after it has been brought into contact with the sample, is dried.

14. The method of one of the claims 8 to 13, characterized in that the polymer chains have additional PEG in the bonding area.

15. The method of one of the claims 8 to 14, characterized in that the polyol used is a monosaccharide, disaccharide or trisaccharide.

16. The method of one the claims 8 to 15, characterized in that the polyol used is trehalose.

17. The method of one of the claims 8 to 16, characterized in that the solid phase substrate is a biochip, an enzyme chip, a protein array, a filter membrane, a microbead, a reaction vessel, a micro-channel system, a flow-through tube system, the tip of a pipette or a flow-through cannula.

18. The use of a solid phase membrane of one of the claims 1 to 7 as a slide for spotting biomolecules.